

LISTING OF CLAIMS

CLAIMS

What is claimed, is:

(1) (currently amended) A sound source localization system comprising:

a sound reflecting element for generating a delay ~~deformation~~ information corresponding to a relative position between a sound source and sound collecting means;

a storage part for recording and storing the acoustic data collected via a said sound reflecting element; and

a sound source localization part for acquiring a sound source position, employing the acoustic data on which said delay ~~deformation~~ information is superposed.

(2) (currently amended) The sound source localization system according to claim 1, wherein said sound reflecting element is formed as a spheroid associated with the relative position between the sound source and sound collecting means to generate said delay ~~deformation~~ information intrinsic to said relative position.

(3) (currently amended) The sound source localization system according to claim 1, wherein said sound source localization part comprises a standard template storage part for storing a standard template containing an intrinsic delay ~~deformation~~ information generated by a white noise sound source, a background noise template storage part for storing a background noise template, a residual generation part for calculating a residual from said acoustic data, employing said standard template and said background noise template, and a selection part for selecting the standard template giving the least residual, employing the generated residual.

1 (4) (original) The sound source localization system according to claim 3, wherein said standard
2 template storage part stores the standard template and the sound source position giving said
3 standard template in association.

4 (5) (original) The sound source localization system according to claim 1, wherein said sound
5 source localization system comprises at least one sound reflecting element, and simultaneously
6 acquires positional data of the sound source including a range to the sound source, an azimuth
7 and an elevation as said relative position.

8 (6) (currently amended) A sound source localization method for acquiring the position of a sound
9 source under the control of an information processing apparatus, said method comprising:

10 a step of collecting the acoustic data with a delay ~~deformation~~ information superposed
11 corresponding to a relative position between a sound source and sound collecting means;

12 a step of storing said collected acoustic data in a storage part; and

13 a step of reading the acoustic data with said delay ~~deformation~~ information superposed and
14 acquiring said relative position of said sound source designated by said delay ~~deformation~~
15 information.

16 (7) (currently amended) The sound source localization method according to claim 6, wherein said
17 delay ~~deformation~~ information is generated by reflection from a spheroid associated with said
18 relative position between the sound source and sound collecting means, and said delay
19 ~~deformation~~ information is generated intrinsic to said relative position.

20 (8) (currently amended) The sound source localization method according to claim 6, wherein said
21 sound source localization step comprises a step of reading out a standard template from a
22 standard template storage part for storing the standard template containing a delay ~~deformation~~
23 information intrinsic to said relative position generated by a white noise sound source, a step of

1 reading out a background noise template from a background noise template storage part for
2 storing the background noise template, a step of calculating a residual from said acoustic data,
3 employing said standard template and said background noise template, and a step of selecting the
4 standard template giving the least residual, employing the generated residual.

5 (9) (original) The sound source localization method according to claim 6, wherein said selection
6 step comprises a step of referring to the selected standard template and acquiring the sound
7 source position corresponding to said standard template.

8 (10) (original) The sound source localization method according to claim 6, further comprising a
9 step of simultaneously acquiring the range, azimuth and elevation as said relative position from
10 said acquired sound source position to said sound source.

11 (11) (withdrawn) A sound reflecting element for generating ~~a delay deformation~~ information
12 corresponding to a relative position between a sound source and sound collecting means, wherein
13 a reflecting surface of said sound reflecting element has an envelope made from a plurality of
14 spheroids that are formed by rotating a plurality of ellipses having the distance between the focal
15 points corresponding to the distance from said sound source to said sound collecting means
16 around an axis connecting said focal points.

17 (12) (withdrawn) The sound reflecting element according to claim 11, wherein said plurality of
18 ellipses are generated in relation with the elevation between said sound source and said sound
19 collecting means and flatter as said elevation is greater.

20 (13) (withdrawn) The sound reflecting element according to claim 11, wherein said reflecting
21 surface is formed as an enveloping surface of said plurality of spheroids that are generated by
22 rotating a corresponding ellipse around the axis connecting said focal points.

23 (14) (withdrawn) A formation method of a sound reflecting element comprising:

1 generating ~~a delay deformation~~ information corresponding to a relative position between a sound
2 source and sound collecting means;

3 a step of generating a plurality of spheroids by rotating an ellipse having the distance between the
4 focal points corresponding to the distance from said sound source to said sound collecting means
5 around an axis connecting said focal points; and

6 a step of forming a reflecting surface by generating an enveloping surface of said plurality of
7 spheroids.

8 (15) (withdrawn) The formation method of the sound reflecting element according to claim 14,
9 wherein said plurality of ellipses are generated in relation with the elevation between said sound
10 source and said sound collecting means and flatter as said elevation is greater.

11 (16) (New) The sound source localization system according to claim 1, wherein said sound
12 reflecting element is an element for generating the delay information corresponding to a relative
13 position between a sound source and sound collecting means, wherein a reflecting surface of said
14 sound reflecting element has an envelope made from a plurality of spheroids that are formed by
15 rotating a plurality of ellipses having the distance between the focal points corresponding to the
16 distance from said sound source to said sound collecting means around an axis connecting said
17 focal points.

18 (17) (New) The sound source localization system according to claim 16, wherein said plurality
19 of ellipses are generated in relation with the elevation between said sound source and said sound
20 collecting means and flatter as said elevation is greater.

21 (18) (New) The sound source localization system according to claim 16, wherein said reflecting
22 surface is formed as an enveloping surface of said plurality of spheroids that are generated by
23 rotating a corresponding ellipse around the axis connecting said focal points.

- 1 (19) (New) The sound source localization system according to claim 1, wherein said sound
2 reflecting element is an element generated by a formation method comprising:
- 3 generating delay information corresponding to a relative position between a sound source and
4 sound collecting means;
- 5 a step of generating a plurality of spheroids by rotating an ellipse having the distance between the
6 focal points corresponding to the distance from said sound source to said sound collecting means
7 around an axis connecting said focal points; and
- 8 a step of forming a reflecting surface by generating an enveloping surface of said plurality of
9 spheroids.
- 10 (20) (New) The sound source localization system according to claim 19, wherein said plurality of
11 ellipses are generated in relation with the elevation between said sound source and said sound
12 collecting means and flatter as said elevation is greater.